

Quiz 5—————**Math 1272**

1 A bacteria culture starts with 500 bacteria and grows at a rate proportional to its size. After 1 hour there are 1000 bacteria. Find the number of bacteria after four hours.

2 Find the equation of the tangent line to the curve at the given $x - y$ point.

$$x(t) = e^{t^2-1}, \quad y(t) = t^3 + 7, \quad (1, 6)$$